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ABSTRACT

The expanding use of the Internet as a mechanism for the dissemination of local government information presents challenges and opportunities to traditional library planning, processes and services. The purpose of this study is to survey local government sites (home pages) via the Internet with the following research objectives: (1) to identify local government resources on the Internet; (2) to examine what kinds of information are in Internet resources and to classify them according to the survey form method for analysis and the preparation of final conclusions; and (3) to provide a framework and guide so that future research in local government information on the Internet may be performed. A survey was conducted of 150 local governments on, or accessible to the World Wide Web (WWW). Sources for local government home pages included, but were not limited to, the following sites: state municipal leagues and government associations and local governments represented on the WWW by other sources. It can be concluded that less than one-third of these pages are effective mechanisms for the dissemination of current and relevant information for citizens of small and medium-sized municipalities of under 200,000 residents. A bright spot in Internet use for local government information has been the availability of e-mail sources. The Internet may change the shape of politics as long as it is used as a two-way medium through which people write messages to officials and receive meaningful responses. After a shakedown period occurs and a state of maturity is reached in the use of the WWW as a source of government information, more current and relevant information will drive out the dated and trivial. The survey form and a list of local government WWW sites surveyed are appended. (Contains 22 references.) (Author/AEF)

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THE INTERNET AS A SOURCE OF LOCAL GOVERNMENT INFORMATION: A WORLD WIDE WEB SURVEY

A Master's Research Paper submitted to the
Kent State University School of Library Science
in partial fulfillment of the requirements
for the degree Master of Library Science

by

Harry T. Sachs

August, 1996

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ABSTRACT

Local government information has historically been undervalued and underutilized in libraries and consequently has been delegated to a low status. The expanding use of the INTERNET as a mechanism for the dissemination of local government information presents challenges and opportunities to traditional library planning, processes and services. A survey of 153 World Wide Web sites containing local government information found that less than one-third provided information that was current and relevant for citizen understanding of local government activities. The disorganized and unwieldy "quantity=quality" approach in providing local government information seems to parallel that of other information sources on the INTERNET.

Master's Research Paper by

Harry T. Sachs

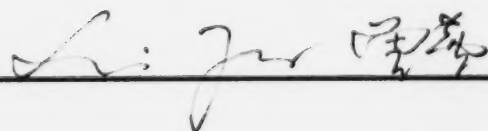
B.A., University of Maryland, 1976

M.U.R.P., University of Pittsburgh, 1984

M.L.S., Kent State University, 1996

Approved by

Adviser



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1. INTRODUCTION

In comparison to other levels in the United States government hierarchy, local government information in libraries has historically been a grab-bag collection of miscellaneous pamphlets, ordinances and regulations (after pleadings by the librarian) and tax forms. Prior to changes in the information environment that have occurred over the last decade, the acquisition of information concerning local government activities was totally dependent upon the librarian's awareness of current events and assertiveness in collection development. Librarians had to become advocates for open information access by following newspaper accounts and watching locally televised government meetings.^{*} Users with a need for local information frequently had to be referred directly to the agency in an elusive search for information (Fry 1978a, 80).

Not only has local government information been undervalued and underutilized in libraries but research on local government has historically lagged in library science. In one study of research activity concerned with government documents in specialization papers, theses and dissertations prepared in ALA-accredited library schools, only two percent involved local government as a subject emphasis compared to two-thirds at the federal level and almost twenty percent at the state level (Richardson 1983, 128). Even the United Nations accounted for twice the number of papers in comparison to local government.

Activities of all levels of government have expanded dramatically in the twentieth century. The gradual shifting of powers from the federal government to the state and local levels since the 1980s makes access to local government information for library patrons even more topical for study. In tandem with changing technologies in the information environment, the need for greater examination of local government information available in libraries has become a necessity.

During the 1990s, the INTERNET has emerged as a tool and technological force in the provision of information. The INTERNET, a vast interrelated network of computer networks,

started in the late 1960s when four mainframe computers were networked together to share data. Most of the INTERNET's growth has occurred in the last decade as the communication infrastructure has broadened and affordable computing power has increased.

The World Wide Web (WWW) is a convenient means of accessing the INTERNET. The WWW is a fully multi-media enabled hypertext system that links together related sites and files across the INTERNET. Utilizing the WWW enables the user to view the hundreds of thousands of interconnected pages ("home pages") or documents with each page having a connection to another page.

The use of the INTERNET as a mechanism for the transmission of local government information presents not only challenges and opportunities for greater public access but threats to traditional library planning, processes and services. According to Bernard Fry, library handling of government documents/information has "developed through a cumulation of immediate empirical procedures with little planning or looking very far ahead either in techniques or technology" (Fry 1982b, 2). Little interest had been shown before the 1980s in the collection development process for government information (Smith 1993, 4).

Issues concerning access and availability, in addition to privacy concerns, of government information are also pertinent to new information technology, such as the INTERNET. Access may be limited to only those libraries that can afford to pay for equipment and telecommunications services. As more materials appear only in electronic format, how will many citizens access these resources without equipment and expertise (Smith 1993, 181)?

Intellectual property rights provided in patent, trademark and copyright law are in need of review. Concern is expressed by catalogers of the potential for loss of important documentation of history and governmental functions due to the creation and storage of government information in electronic formats (Bender, Kadec and Morton 1991, 22).

According to Peter Hernon, librarians also need to redefine their professional roles, levels of expertise and professional commitments for the distribution of government

information (Swanbeck and Hernon 1993, 169). Librarians have great credibility with decision-makers who determine public information policy because their objectives are not perceived as being self-serving. The library profession is regarded as serving the public interest as a result of its concern with the public's right to continued and increased access to government information (Purcell 1983, 136)

In summary, the need for this study is based upon the following factors:

1. the recognition of government information as one of the most neglected and underutilized information resources available to the public with grossly inadequate, inefficient and often wasteful methods for providing access.

2. minimal treatment of local government as a source for research in the library science profession.

3. trends in national government of a gradual shifting of powers and responsibilities from federal to state and local governments that will place additional demands on libraries to provide local government information in an efficient and timely manner.

4. the rapid emergence of a new technological force in information provision that has led to a research gap in current awareness as to what is being distributed via the INTERNET.

1.1 Purpose of the Study

The purpose of this study is to survey local government sites ("home pages") via the INTERNET with the following research objectives:

1. Identification--to identify local government resources on the INTERNET.

2. Examination and Classification--to examine what kinds of information are in INTERNET resources and to classify them according to the survey form method for analysis and the preparation of final conclusions.

3. Future Investigation--to provide a framework and guide so that future research in local government information on the INTERNET may be performed.

1.2 Definitions of Terms

In this study, "local governments" refers to governments below the county level, specifically cities, towns, boroughs and villages, unincorporated or incorporated. "Government documents" as part of government information in the context of this study will be defined by the ALA definition:

"Any document originating in, or issued with the imprint of, or at the expense and by the authority of, any office or a legally organized government or international organization (Smith 1983, 9)".

These documents may take the form of legislative documents, such as bills, hearings, reports and records of legislative proceedings; administrative documents such as rules and regulations; annual reports, special reports, reports of commissions and court decisions. This definition would not cover information that is primarily used to inform the public, such as pamphlets, brochures and directories.

1.3 Limitations of the Study

The vast amount of information and proliferation of WWW sites necessitates the limitation of this study to local governments of a population of 200,000 or less, based upon most recent U.S. Census data. It is understood that much information concerning local governments (e.g., census information) is available from Web sites of other levels of government (county, regional, state and federal); however, detailed examination of these resources is outside the scope of this study.

This study is also not intended to be an examination of technology (e.g., Electronic Bulletin Boards, Freenet Access) in the provision of local government information. A rank-order assessment of the value and utility of individual sites will not be presented but this will not preclude a critical analysis in overall findings and conclusions.

2. LITERATURE REVIEW

New information sources are predicted to change the professional and personal lives of virtually everyone in the developed world with librarians being affected more than most (Cetron 1994, 3). With the amount of pure information available in the world doubling every five years, a crisis is occurring where control over a fast-growing supply of information already threatens to overwhelm ability to deal with it. The INTERNET, which is often used synonymously with "information superhighway", is considered to be the most useful tool in meeting the challenges of the early 21st century and is being shaped by a host of demographic, economic and social trends in addition to global trends (Cetron 1994, 9).

As the United States moves toward a knowledge-based society, rather than on the manufacturing and agricultural-based economics of previous years, more literature has been developed regarding the use of the INTERNET in professional fields, especially its effect on education. For example, in health education, articles have addressed the multiple benefits of using the INTERNET and provided information for beginners on how to get started online (Stivers 1995). Literature has also appeared regarding the changing role of reference and bibliographic instruction at the undergraduate level with the advent of computer networks (Farber 1995; Pask 1995). The INTERNET has also been seen as having a role in peace education and the prevention of violence in using global classrooms in setting up an international information and communications consortium (Varis 1995).

In addition to educational purposes, the INTERNET has been used for the environmental and physical sciences (Taylor 1995; Wiggins 1995). Businesses have opportunities and market strategies on the INTERNET including the merchandising of online electronic publishing, book sales, newspapers and periodical publishing and selling products, computer software and hardware.

Products that may be sold on the INTERNET may not just be business-related but also political. Candidates for elected office, especially in this presidential election year (1996) are

scrambling onto the WWW. More office holders are providing position pages and constituent service information on line. While some observers bet on a new wave of political participation, others feel that the INTERNET could do more harm than good. They say that electronic communications are a poor substitute for grassroots organizing (Guernsey 1996, A29).

One observer asks readers to consider the unintended effects on society of inventions, such as the computer. With more people focused on computer screens, they will become increasingly disconnected from their communities to the point of eroding participatory democracy (Sclove 1995).

Other literature on the INTERNET addresses not only its educational role but also issues of access, copyright and intellectual property. (Shade 1995). Who will control access to the INTERNET? What happens to intellectual property rights? What can be allowed on the system? (Cetron 1994, 44).

As an emerging technological resource in the provision of information, the INTERNET has received only perfunctory and limited coverage in library science and political science literature. Not until the 1990's has the INTERNET become the focus, rather than merely a brief mention, in literature as a new medium for information accessibility in government and libraries.

A noticeable increase in literature about the use of the INTERNET as a government information source has occurred since 1994. These articles have appeared in the form of "how-to" articles, however, which usually feature a glossary of terms or a listing of WWW sites (Maxwell 1995, 24; Langelier 1995a, 43; Langelier 1995b, 43). It is highly likely that as more local governments use Web sites that more substantive articles concerning the content and evaluation of these sites will frequently appear in the literature.

In its official publication Documents to the People, the Government Documents Round Table of the ALA debuted an "INTERNET Waves" column as a regular feature in September 1994. According to Maggie Parhamovich in the column's debut, this feature will "surf the globe

in search of INTERNET sites which may be of interest to documents librarians" (Parhamovich 1994, 160).

Among local governments, the city of San Carlos, California has developed a sophisticated on-line information program for its citizens. The original purpose of the San Carlos On-Line Project, according to Brian Maura, Assistant City Manager of San Carlos, was "to allow people to send and receive electronic mail from city hall, to read about city projects and jobs and to obtain general information" (Moura 1996, 32).

The city asked the Association of Bay Governments to provide a statistics program that would track the usage of the top pages on its INTERNET area, thus monitoring from month to month the information that people were accessing most often. The most requested information on the sites, aside from the city home page, consisted of public safety information from the police and fire departments.

San Carlos also sees the INTERNET as an economic development tool by providing information about businesses and services in the community. Twenty-two businesses based in San Carlos have already publicized their services. Moura feels that the INTERNET initiative has been a big success based upon the number of people who have used the site since 1995 and enthusiastically recommends to other local governments the use of electronic mail and the WWW.

3. METHODOLOGY

During a forty-five day period from April 15 to June 1, 1996, a survey was conducted of approximately 150 local governments on, or accessible from, the WWW. The content and characteristics of these home pages were noted and coded by government and home page characteristics and subject matter for tabulation purposes on the attached survey form (see Appendix A). This collection of data was analyzed and final conclusions prepared.

According to Busha, "surveys" have long been conducted in the library science profession (Busha 1980, 53). Survey research methods allow investigators to gather information

about target populations via selection of a small proportion, or sample, of the population and then generalize their findings to larger groups. The target population in this study consisted of web sites of local governments with less than 200,000 residents.

Some useful guidelines related to survey research include the following: (1) survey assumptions should be explicitly outlined; 2) survey research methods appropriate to the research problem of the inquiry should be used; 3) the sample selected in a survey should be relevant to the inquiry; 4) questions posted should be related and dependent.

The primary data collection instruments in surveys consist of questionnaires. Questionnaires can be constructed so that quantitative data are relatively easy to collect and analyze. In exploratory studies, such as this study, questionnaires allow the collection of insightful information about a relatively unexplored area or subject. In this study, questions are being "asked" of the web pages as to their content.

Selection Criteria

The following criteria was used in assessing whether a local government would be selected for this survey: 1) a population size of 200,000 residents or less so that a manageable amount of data could be analyzed on government subject matter; 2) a minimal amount of some local government information on the web site. Sites containing entirely commercial material were excluded; 3) geographic diversity so that at least one site from every state was represented.

Data Sources

Sources for local government home pages included, but were not limited to, the following sites:

1. State municipal leagues and government associations (produced or endorsed by governments or non-profit organizations with a local government emphasis).

2. Local governments represented on the WWW by other sources (commercial, federal, educational, convention and tourism, citizen-initiated, internet-provider initiated, etc.)

- (a) USA City Link

(b) City Net

(c) US Community Pages Index

(d) Library of Congress State and Local Governments Page

(e) Piper Resources (government consulting firm)

Links from these sites to other sites, not necessarily Web sites, were utilized to provide a comprehensive sample of local governments.

4. DATA ANALYSIS

4.1 Local Government Characteristics

A survey of one hundred fifty-three (153) web pages of local governments was conducted during the spring of 1996. Appendix B contains a list of localities surveyed by state, population and regional location. A conscientious attempt was made to obtain a varied selection of sites by state and region. As indicated in Table 1, these sites were geographically dispersed by location with the greatest number of local governments cities located in the South, followed by the Mid-Atlantic, Midwest and Pacific regions.

Table 1
Local Governments--Geographic Location

South (including FL, NC)	30 (20%)
Mid-Atlantic (including NJ, NY, PA)	27 (17%)
Midwest (including IL, MI, OH)	26 (17%)
Pacific (including AK, CA, HI)	26 (17%)
Mountain & Great Plains (including CO)	17 (11%)
Southwest (including Texas)	15 (10%)
New England (including Massachusetts)	<u>12 (8%)</u>
Total	153 100%

From the use of data sources mentioned in Methodology, states were found to vary radically in the number of web sites that could be analyzed based upon population size. With the exception of their largest cities (with population sizes of over 200,000), states with large population bases such as Georgia, Indiana and Louisiana were severely lacking in web sites providing any local government information.

To the other extreme, a sparsely populated state such as Nebraska produced a far greater number of web sites than could be expected for a state with its population size. While an attempt was made to find sites in all fifty states, some smaller states such as Delaware, Hawaii and Montana produced no web sites meeting the criteria of this study, although many sites were found containing exclusively tourist and commercial information.

The population size of localities for the purposes of this study was limited to 200,000 residents or fewer, according to updated 1995 U.S. Census figures from the 1990 Census. Table 2 indicates that three-fourths of the localities contained a population size of 50,000 or fewer. Almost fifteen percent of localities contained a population size of over 100,000 residents. The range in population size varied considerably from less than 500 (Chapin, South Carolina) to almost 200,000 (Madison, Wisconsin) residents.

Table 2
Local Governments--Population Size

Under 10,000	26 (17%)
10,000 to 24,999	43 (28%)
25,000 to 49,999	45 (29%)
50,000 to 99,999	20 (13%)
100,000 to 149,999	11 (7%)
150,000 to 200,000	<u>8 (6%)</u>
Total	153 100%

A tabulation was also conducted of the 153 localities as to any unique characteristics of the localities. Almost fifteen percent of the sites were either the home of a major university, a tourist destination and or/state capital. Eleven cities were the home of major universities with some cities such as Madison, Wisconsin functioning as the state capital and home of the major state university (University of Wisconsin).

4.2 Home Page Characteristics

(1) Provider

The provider of the web site is an important characteristic in assessing subject content of local government web sites. Nongovernment web providers are more likely to include business-oriented (as in Chamber of Commerce) and visitor-oriented information such as

accommodations, restaurants, points of interest and shopping. As shown in Table 3, three-fourths of the 153 sites utilized government or commercial providers as determined by the domain in the home page web address:

Table 3
Home Page Provider

Local, regional, state government	58 (38%)
Local municipality	49
Public library	4
Regional council of govs	4
State	1
Commercial	57 (37%)
Non-profit (community networks, etc)	30 (20%)
Educational	<u>8 (5%)</u>
Total	153 100%

(2) Features

(a) Copyright

Twenty-nine percent (44 sites) of home pages indicated that the site was copyrighted. Local governments held almost half of copyrights. Considering the INTERNET's recent emergence as a technological tool in the provision of information, no copyright year existed before 1994.

Table 4
Home Page Copyright Holder

Government	21
Local municipality	17 (1 joint)
Public Library	2
Regional Council of Gov	1
Economic Dev Corp	1
Commercial	9
Community based network	4
Education	2
Commercial & Individual	1
Individual	1
Unspecified holder	<u>6</u>
Total	44

(b) Visitor Counter

As a gauge of interest, providers of home pages may include a visitor counter, similar to the odometer of an automobile, to indicate the number of clicks to that particular home page. Of the 153 home pages, fifty-one or approximately one-third provided this feature. Unsurprisingly, given the relative newness of the sites, no site had over 2000 clicks.

(c) Update Frequency

To provide timely and up-to-date information to their citizenry, localities should institute a process to indicate that information provided through home pages is of a current nature. One means of achieving this is by providing an update line on the home page--usually at the end--so browsers may feel confident that the information is not outdated. Almost sixty percent of the 153 sites did not provide an update indicator. Only five pages contained a gap of over three months from the time of survey with the longest time period consisting of eleven months.

Table 5
Home Page Update Indicator

Within 30 days	44 (29%)
30-90 days	17 (11%)
91 days or more	5 (3%)
Unspecified	<u>87 (57%)</u>
Total	153 100%

In addition to an update line on the home page, many sites begin with a "What's New" or similar type of feature to highlight changes on their web pages. A total of forty-seven sites (31%) provided this feature.

(d) Audio Features

With many home pages in an initial state of development and experimentation, advanced technological features such as audio capabilities were rarely offered. Only two home pages incorporated this form of technology. Tonawanda, New York's home page allows browsers to listen to a broadcast from an area radio station by clicking on the appropriate call letters. The home page of Providence, Rhode Island not only allows the browser to read the mayor's

welcome message but also to access an audio version of it. Access to the audio portions of the two home pages, however, requires appropriate software.

4.3 Interactive Capabilities

The development of the INTERNET as an information resource has allowed citizens to not only passively browse information but actively participate in the government decision-making process by communicating directly with government officials on-line. Access to government information has also been increased by the use of file downloading to obtain large quantities of information from local government agencies.

(1) E-Mail

The number of home pages utilizing E-Mail technology was determined by the presence of at least one E-mail address for a government official or administrator. E-mail addresses for providers, usually commercial in nature, concerning comments on web page design, content, format, etc. were closely examined to determine relevancy to communication with local governments. Over half of the localities (52%) provided at least one E-mail address to government officials in their sites. Few localities, however, provided an E-mail address for all elected and appointed officials. For example, on some sites only one or two members of a legislative body would have an E-mail address.

COOL Sites on the Web!

--In Medford, MA, citizens can post messages on Post-It Boards and see what's posted.

--Lubbock, TX has an experimental mailing list for the exchange of ideas and information called "City Talk". The city not only has an E-mail directory for government but also for citizens and businesses.

--Madison, WI features an E-Mail directory of city personnel in various formats. E-mail addresses may be accessed in table format, by name in table and text format and department in table and text format. Not only is a listing of city personnel phone numbers provided but also a listing of TDD city agency phone numbers.

(2) Other Online Communication Uses

Seven sites (5%) allow browsers to submit their names and addresses for further information on the municipality. These requests are usually for tourist/economic development inquiries. The opportunity to sign the guestbook is afforded users of fifteen sites (10%). No municipality offers on-line ordering of publications but six sites (4%) provide some listing of available publications.

COOL Sites on the Web!

--In **Davis, CA** browsers can be put on a mailing list to subscribe to keep informed of progress on the Davis General Plan.

--Individuals who are interested in submitting their applications for boards, commissions and committees may do so on-line in **Reno, NV**.

--Citizens in **Knoxville, TN** may submit an on-line form to the mayor for discussions or comments on city services.

--In **Clarksburg, WV** an application request form for a municipal business license may be submitted on-line.

(3) File Downloading and Software Sharing

Five localities (3%) offer some type of file downloading of government information.

COOL Sites on the Web!

--Job applicants in **Davis, CA** can download a job application form, either in WP 5.1 or Word 6 versions.

--A downloadable affidavit for registering a home business/office is available from **Newton, MA**.

--Large scale maps of the comprehensive plan, zoning and tax increment districts can be downloaded from the Community Development Department of **Roseville, MN**.

--In **Mercer Island, WA**, an FTP is provided to obtain a copy of the Summary of Town Center Plan.

--The file for the 1996 property tax base of the city of **Madison, WI** may be downloaded in Adobe format

Five localities (4%) offer browsers the option of downloading various software packages. Four sites (Seaside, CA, Haddonfield, NJ and Brownsville and Coppell, TX) have separate pages for listing of software in the public domain that may be downloaded.

COOL Sites on the Web!

--In **Torrance, CA** Netscape and Adobe Acrobat Reader may be downloaded.

--A copy of Microsoft's Internet Explorer may be obtained from the **Kent, WA** homepage.

4.4 Searching Strategies

Few sites offered innovative mechanism for subject or keyword searching in government information. For many smaller communities, sophisticated techniques are really unnecessary due to the simpler governmental structures. Many sites are also still partially under construction and lack information in many categories.

Eleven sites (7%) offered an A-Z index where the browser clicks on a certain letter to find subject areas beginning with that letter. Searching capabilities were enhanced in six sites (4%) where a keyword search is entered by subject for access to relevant documents.

COOL Sites on the Web!

--**Davis, CA** devotes a page to searching the city's web. On this page, keywords are searched by full text, titles, or key words with a limit as to the amount of documents retrieved. This page also gives search options using "AND" "OR" and "NOT" and right-hand truncation inquiries.

4.5 Visual Content

(1) Scenic Images

Virtually all of the 153 sites incorporated municipal designs in the forms of seals or logos on the top of their home pages for visual identification. Whether out of civic pride or economic development purposes, one-third (51 sites) incorporated scenic images consisting of

photographs of city hall, overall views of the city or points of interest, especially historic sites. Seven of these fifty-one sites offered browsers a "virtual tour" of the city where a browser can click on a map to visit sites of his or her choice.

COOL Site on the WEB!

--The colonial seaport of **Annapolis, MD** offers a "virtual tour" of its downtown area, starting at the City Dock and following the pointers embedded in the text.

(2) Map Information

Approximately thirty-five percent of municipalities featured some kind of map on their sites. Some sites contained a separate page where up to six different types of maps could be accessed. Regional location maps were most popular with almost one-quarter of sites (33) featuring this type of information. Other types of maps, however, were found on less than ten percent of the 153 sites. The following table indicates the type and number of site specific maps offered:

Table 6
Map Information on the Web

Regional Location	33 of 153 sites (22%)
Metropolitan Location	15
City (Major Street)	14
Street (with detail)	7
Downtown	7
Transit	6
Comprehensive Plan/Zoning	5
Council/Legislative Districts	5
Schools, Recreation Sites	5
Industrial Park sites	3
Census Tracts	2
3-D Computer Generated	1
Municipal Complex	1
Lot Line/Map	1
Contour Map	1

COOL Sites on the Web!

--The city of **Davis, CA** presents a city map with zoom features to highlight a certain area of the city with directional clicks for an even more specific street location.

--Aurora, NB features maps showing U.S. soybean and corn yield in 1994, by county, on its Economic Development page.

4.6 Web Site Subject Content

One criteria for inclusion in this survey of 153 web pages was the provision of some aspect of local government information on the Web site. As might be expected, subject matter varied considerably to encompass all types of community activities, business, points of interest, history and even local weather. To merit inclusion in a category, subject matter either had to be clickable or stand out for the browser to find. A passing mention in an overall community description was not considered sufficient for tabulation purposes. After an analysis was made by content, subject matter areas could be grouped into three categories: Tourist/Visitor Information/Attractions; Business/Economic Development and Community Services, Resources and Character. After local government, the following subject categories were found to be most prominent.

Table 7
Web Sites Subject Content (Excluding Government)

Tourist/Visitor Information/Attractions

Calendar of Events	69 (of 153 sites)	(45%)
Points of Interest/Attractions	57	(37%)
Accommodations	29	(19%)
Restaurants	26	(17%)
Entertainment	20	(13%)
Visitors Bureau/Welcome Center	17	(11%)
Shopping	16	(11%)

Business/Economic Development

Chamber of Commerce/Economic Development	50	(33%)
Business Directory	28	(18%)
Business Home Pages	27	(18%)
Real Estate	14	(9%)
Media	10	(6%)
Downtown Organizations	7	(5%)

Community Services/Resources/Character

Demographics (Community Profile)	92	(60%)
History	81	(53%)
Climate	35	(23%)
Community Groups and Associations	26 (5 w/h page)	(17%)
Places of Worship	23 (4 w/h page)	(15%)
Community Services (Social-Referral)	14 (1 w/h page)	(9%)
Newcomer/Relocation Information	6	(4%)
Local Resident home pages	5	(3%)

The large number of commercial providers for home pages in this survey has resulted in a sizable quantity of visitor-oriented information on these sites. Many government provider home pages seem to view this technology as an outlet for business and economic development with many chamber of commerce/economic development sites. Some governments did include private enterprises on their home pages, such as accommodations and restaurants.

Links to Other Home Pages

Seven of every ten sites (107 total) offered links to other home pages. While impossible to list every kind of link, it is possible to assign links to broad subject categories as shown in the table below. More than half of the home pages contained some type of link to government resources--federal, state and local--and slightly more than one-third offered links to other community page networks such as City.Net, USA City Link, etc.

Table 8
Other Home Page Links

State Government	54 (of 153 sites)	(35%)
Local Government	39	(25%)
Federal/Overseas Government	38	(25%)
Business	30	(20%)
Education	27	(18%)
News (Newspaper, CNN, Election)	23	(15%)
Leisure (Sports, Tourism)	19	(12%)
Search Engines (Yahoo, Lycos)	17	(11%)
Climate	10	(6%)
Area Community Networks	8	(5%)

Other City Home Pages

City.Net	43	(28%)
USA City Link	40	(26%)
US Community Pages	8	(5%)
Public Technology	3	(2%)

COOL Sites on the Web!

--The Cleveland suburb of **Eastlake, OH**, obviously home to many of Eastern European descent, has links for the Republic of Croatia, Dubrovnik and Croatian Radio Television.

--**Coppell, TX**, located near Dallas-Fort Worth Airport, has a link for Fedex online tracking.

4.7 Local Government Information on the Web

The assessment of local government information on the WEB presents difficulties for two reasons: (1) governments vary in organizational structure with some having more complex organization and (2) some functions, services and activities are performed by different departments in government. The licenses and permit function, for example, may be in a self-contained department, in the city clerk's office, or in the engineering or community development departments. In determining the adequacy of information presented, a generic reference in an overall summary of a municipality was not tabulated--at least a listing with a name and/or phone had to be present.

(1) Elected/Appointed Officials

Over half the web sites surveyed (56%) contained at least a listing and telephone number for the chief legislative body--usually defined as a city or town council. Almost half (48%) contained at least a listing and/or telephone number for the chief elected official--in most cases, the mayor. Slightly over one in five sites contained a description of duties for those offices. Other frequently mentioned non-elected officials, such as city manager/administrator, city clerk and city attorney were listed and/or defined in fifteen percent or less of web sites. Members of other boards and commissions were listed in fifteen percent of sites and contained a description of duties in twenty percent.

An assessment was also conducted of the number of photographs and biographies present on web sites of town officials. A picture and/or biography was present in at least fifteen percent of city councils and twenty percent of mayors. Many pictures of the mayor were contained in a "welcome to" introduction on the web site. Photographs and/or biographies of city manager/administrator, city clerk, attorney and members of other boards and commissions are practically nonexistent. Photographs and biographies serve not only a useful function for citizen identification purposes but for future election campaigns.

Table 9
Local Government Information--Elected/Appointed Officials

	<u>Photo</u>	<u>Biography</u>	<u>Duties</u>	<u>Listing & Phone</u>
Manager/Administrator*	7	3	19	18
Mayor/Chief Executive	33 (22%)	21 (18%)	32 (21%)	73 (48%)
Council/Legislative Board	22 (14%)	25 (16%)	34 (22%)	85 (56%)
City Clerk	1	-	23 (15%)	18 (12%)
City Attorney	-	-	13 (8%)	10 (7%)
Other Boards and Commissions	-	-	30 (20%)	23 (15%)

*Some municipalities do not have a manager/administrator position

(2) Functions, Services and Activities

An assessment of functions, services and activities again required at least a listing with phone number and/or department head for consideration as an effective mechanism for communicating with citizens. A brief description consisted of at least a sentence up to a paragraph. A description entailed more than one paragraph and in many instances, a separate click on the site. Subject headings for an adequate assessment needed to be broad enough to encompass most government activities. Table 10 rank-orders the most popular functions, services and activities in local government.

Table 10
Local Government Information--Functions, Services and Activities

	<u>Listing</u>	<u>Br Des</u>	<u>Des</u>	<u>Total</u>
Police	16	20	64	100
Parks & Recreation	9	16	72	97
Education	-	7	76	83
Fire	15	21	41	77
Community Development/Planning	9	15	49	73
Libraries	6	7	59	72
Public Works/Engineering	11	17	39	67
Economic Dev (Doing Business in)	1	5	51	57
Utilities	7	19	31	57
Transportation	2	6	42	50
Finance/Fiscal	10	11	19	40
Health & Human Services	3	10	22	35
Licenses & Permits	-	3	29	32
Environmental Protection (Recycling)	-	4	27	31
Judicial/Municipal Court	3	9	15	27
Personnel & Human Resources	2	7	16	25
Housing	-	2	17	19
Information Management	1	7	11	19
Emergency/Medical	2	3	13	18
Purchasing (Bids, Contracts)	1	1	8	10
Consumer Affairs	-	-	1	1
Miscellaneous--Animal Control				17
Film Bureaus/Commissions				4

The top five most listed subject categories--police, parks & recreation, education, fire and community development/planning are also the most ubiquitous and very public functions, activities and services in practically all local governments. Many local governments devoted a separate page to the police category, which not only contained a description of functions and activities but also safety tips and even listings and photos of most wanted criminals.

The high rankings for community development/planning and economic development may reflect a growing interest of citizens nationwide on "quality of life" concerns. The overwhelming number in the description category for economic development indicates the use of the Internet as an economic growth tool for communities for browsers far beyond the local community. Many economic development descriptions contained highlights of business incentives for relocation efforts.

Other interesting data on subject matter on local government activities, services and functions:

- Thirty nine sites (25% of 153) listed current employment opportunities with detailed job descriptions.

- Extensive tax rate information was available on eighteen sites (12%) usually under the fiscal or economic development departments.

- Detailed voter registration procedures were found on thirteen sites (9%)

- Eleven sites (7%) alerted citizens to future capital works projects and construction sites.

- Ten sites (6%) contained clicks on "Sister Cities" overseas to local communities.

- Community cable/radio schedules were available on ten sites (6%).

- Seven sites (5%) contained detailed information on current bids and contracts.

- Five libraries (3%) allowed on-line access to their catalogs.

COOL Sites on the Web!

- In Escondido, CA a browser can look up property parcel information by parcel number or address. Escondido also has a site on "Sensitive Species" in the area.

- Colonie, NY presents extensive information on youth and senior citizen activities.

- Eugene, OR organizes its local government information by a service (clickable) view or organizational (clickable) view.

- Providence, RI provides a calculator function on its business development page.

- Richardson, TX presents the latest health department restaurant scores on its site.

- Mercer Island, WA uses its home page for reaching developers in a public/private joint venture.

(3) Citizen Communication

As discussed previously, less than one-third of home pages provide a "What's New?" (nongovernment and government) section or have been updated within the last thirty days of

viewing. For government-related events and activities, the situation is no different. Only eighteen sites (12%) contained a calendar of government events and activities.

Information concerning legislative activities should a similar pattern. Thirty-one percent of sites (47) allowed browsers to click on for council agendas while forty sites (26%) gave browsers an opportunity to view past council minutes. Meeting schedules (by specific date) were only available on one-sixth (25 sites) of web pages.

Less than ten percent of sites provided minutes or agendas of other boards and commissions, with half of those from the planning commission. Other boards and commissions for which minutes and agendas are available include the Board of Architectural Review, Board of Estimates, Historical Commission, Public Health Commission, Civil Service Commission and Zoning Board of Adjustment.

Table 11
Citizen Communication-Legislative

Council Agendas	47 (31%)
Council Minutes	40 (26%)
Meeting Schedules (By Specific Date)	25 (16%)
Other Boards & Commissions Agendas	12 (8%)
Planning Commissions Agendas	7
Other Boards & Commissions Minutes	8 (5%)
Planning Commission	4
Government Calendar of Events & Activities	18 (12%)
Election Results	5 (3%)

At the administrative level of government, regular communications with citizens were far worse. Fewer than ten percent of all sites featured this type of information. As indicated in the table below, only thirteen sites (8%) issued press or news releases on their web sites. Ten sites (6%) provided newsletters on a regular basis--either weekly or monthly. Regular reports from the city manager/administrator were highlighted on seven of the sites with this form of government. Five sites (3%) provided election results.

The mayoral office did not fare as well as the town manager in information sources. A "State of the City" address was featured on only five sites (3%) while any type of mayoral speech was featured on only two sites.

Table 12
Citizen Communication-Administrative

Press Releases	13 (8%)
Newsletters	10 (6%)
Regular reports from town manager	7 (**)
State of the City address	5 (3%)
Election Results	5 (3%)
Recent Mayor's speeches	2 (1%)

4.8 Government Documents on the Web

After an analysis of the 153 sites, government documents, which are defined under Definitions in this study, available on web sites could be grouped into three major categories: (1) fiscal information;(2) laws, ordinances and codes and (3) reports and plans.

(1) Fiscal Information

Twenty-three sites (15%) provided some detailed financial information on local government budgets. Criteria used in assessing the adequacy of budgetary information was similar to analyzing aspects of local government information--a brief mention in a summary context would not be adequate for tabulation purposes.

Budget information appeared in three different formats: 1) a mayor or city manager's budget message; 2) a budget summary as a review or overview and 3) actual line-by-line budget. This information was mostly presented in text format but two sites also provided graphical representations via pie charts of revenues and expenditures.

(2) Laws, Ordinances and Codes

Few sites provided full-text offerings of laws, ordinances and codes. Five sites (3%) provided their city charter and four sites (3%) contained a city code. Sites with new or proposed laws were practically nonexistent. Only one site, in Annapolis, MD, could browsers access full-text of proposed legislation.

Specific ordinances on web sites were addressed in only thirteen sites (9%) and addressed a varied assortment of issues from bikes/skateboarding (Morgantown, WV) to smoke

detectors (Ithaca, NY). With the exception of three sites, full-texts of specific ordinances were not used with most ordinance references in summary form.

Legal information was also rarely found on web sites. Madison, WI provided a digest of the city's Equal Opportunity Commission's discrimination cases with decisions issued from 1976. Only two sites contained legal information beyond the local governmental level. Des Moines, WA provided the revised code of Washington State relating to courts and law. Myrtle Beach, SC displayed the Freedom of Information Act from the South Carolina code.

(3) Reports and Plans

The most popular reports and plans in local government information involved annual reports and comprehensive plans, respectively. Six sites (4%) contained annual reports from the municipalities addressing a variety of community issues. Some cities featured reports from various separate departments. For example, Mankato, MN presented reports from its Community Development and Public Safety departments.

Excluding annual reports, less than ten cities featured reports on various topics, ranging from Housing (Tonawanda, NY) to Recycling and Tobacco Vendor Compliance (Madison, WI) to cable renewal (Boulder, CO). Only one non-local government document was found on a site-- Tonawanda, NY's "State of Manufacturing in Erie County-1995".

Most plans offered in full text concerned community development/planning activities. In fact, one site (Mercer Island, WA) was entirely devoted to a summary plan for development of a town center in a private/public venture.

Plans on web sites ranged from neighborhood (Spokane) to Parks and Recreation (Boulder) to redevelopment (Lima, OH) to waterfront (Tonawanda) to disaster/Hurricane (Myrtle Beach, SC). Eight sites (6%) contained full-text documents relating to master plan, strategic plans for future-oriented development in their communities. These plans ranged from Vision 20/20 (Springfield, MO) to Farragut, TN (2004 plan) to Worcester, MA (Strategic Plan 2000).

The use of the INTERNET for promoting awareness of these plans is an interesting, although, not widespread way of disseminating local government documents that are very rarely read, nor even seen, by a vast majority of citizens. Few residents will take the time to go to a government office or the library to read such material or to buy a copy (usually at great expense). The INTERNET allows browsers to not only view, but copy relevant portions of the documents, allowing much greater access. As mentioned previously, economic development/ community development departments were major local government subject matter on a high proportion of web sites.

4.9 The WWW as a Tool for Political and Policy Advocacy

The explosion in information resources on the INTERNET can be seen in the proliferation of pages with municipality pages with local government information. While an attempt was made to survey pages that were in some final stage of completion, many pages contained information that had no links as yet, were not accessible or contained no information when clicked upon.

The use of Web pages as a tool for political and policy advocacy has not yet been achieved if the current state of site local government information is any indication. Only one web site--Des Moines, WA in suburban Seattle--has advocated policy positions on controversial issues. On the Des Moines home page, a viewer may click to a page regarding the city's opposition to the building of a third runway at Seattle Airport. The city not only presents its position concerning this matter but provides clicks to coalitions that have formed in opposition to this project.

Election campaign information is another unrealized use of WEB sites in promoting government information. The timing of this survey during the spring rather than the fall may have had an effect on the lack of election campaign information. Some sites did offer information on voter registration and polling place information. Taos, NM presented a ballot on its web site for the upcoming June election. A browser could access a voter guide regarding

candidates and issues in Eugene, OR but this may be an extension of Oregon state law requiring voters guides to be distributed by mail to every voter. In the near future, voters guides with candidate and issue information could be seen more often on the web in the dissemination of local government information.

5. CONCLUSIONS

The rush to establish a presence on the WWW has resulted in many web pages with information of dubious merit with the straddling of a fine line between value-added information and trivia. After all, the chaotic and haphazard presentation of many home pages parallel the rise of the INTERNET system itself. Like a child just beginning to walk, local governments have taken tentative first steps that may later result in an effective presentation combining text, visual elements and maybe even audio content.

From viewing all subject matter, not just local government, on 153 web pages, a conclusion may be reached that less than one-third of these pages are effective mechanisms for the dissemination of current and relevant information for citizens of small and medium-sized municipalities of under 200,000 residents. This conclusion is based upon the following observations: 1) less than one-third of pages provide any sort of "What's New" type of feature for updating local government information; 2) less than one-third provide some kind of update indicator for current awareness purposes; 3) adequate descriptions of appointed/elected officials are found in less than one-third of pages. With the exception of four or five most prominent and politically viable departments, less than one-third provide an adequate description of services and functions in municipalities; 4) timely information on government activities is also available from less than one-third of pages, including the viewing of legislative agendas and minutes and meeting times for all boards and commissions in a municipality; 5) only approximately one-third of web pages provided any visual content, usually a regional or metropolitan area map that may not be of too much use to local citizens;

6) few governments provide a coherent means of accessing organization. The use of A-Z listings and keyword searching is minimal so far.

A bright spot in INTERNET use for local government information has been the availability of E-Mail sources. While over one-half of Web sites have E-mail, few governments are capable at the present time of providing full access to all officials. The INTERNET may change the shape of politics as long as it is used as a two-way medium through which people write E-Mail messages to officials and receive meaningful responses.

In addition to currency, the issue of relevancy must be addressed in INTERNET use. Too many local government web pages try to copy information emanating from the phone directory, league of women voters pamphlets and chamber of commerce propaganda ("howdy pages"). Considering the global audience of the INTERNET, it is not surprising that much of the local government information takes on a home-town boosterish, economic-development oriented slant. Location maps, generally regional and metropolitan in nature, area provided more likely for global web surfers rather than a local constituency. How many local residents are so geographically illiterate that they are unaware of their regional location in the United States? Extensive tax rate and utility information is more for the benefit of a select business elite than local residents. Too much information is also of the "howdy" variety (We are located in..., Community Profile, History, Points of Interest, etc.)

Not only is too little and too much derivative current government information provided many aspects of it is trivial and provincial in content. Who cares about a listing of previous council members in 1955? Some government information, however, may be relevant to current elected officeholders who see WWW pages an effective means of advancing their careers (photos, bios, my hobbies are . . . , etc.). Future uses of local government could be seen in pertinent election information or an online discussions with candidates.

In the information provided on the home pages, much depends on the "official" and "unofficial" status of the information endorsed by local government. Much commercial

information is contained on these sites, which if not "official" are "endorsed" or "supported" in some aspects by local governments. In fact, all but one site was "endorsed" or "supported" in some way by local governments.

Hopefully, after a shakedown period occurs and a state of maturity is reached in the use of the WEB as a source of government information, more current and relevant information will drive out the dated and trivial. Instead of "think globally and act locally" maybe local governments should think in the reverse as more local government information is provided on the INTERNET.

APPENDIX A: SURVEY FORM

I. CITY CHARACTERISTICS

Geographical Location

- ☐ New England (including Massachusetts)
- ☐ Mid-Atlantic (including New Jersey, New York, Pennsylvania)
- ☐ Midwest (including Illinois, Michigan, Ohio)
- ☐ South (including Florida, North Carolina)
- ☐ Southwest (including Texas)
- ☐ Mountain States (including Colorado)
- ☐ Pacific (including Alaska, California, Hawaii)

Population Size

- ☐ 1-9,999
- ☐ 10,000-24,999
- ☐ 25,000-49,999
- ☐ 50,000-99,999
- ☐ 100,000-149,999
- ☐ 150,000-200,000

Unique Characteristics

- ☐ Major University
- ☐ Tourist Destination
- ☐ Other(_____)

II. WEB PAGE CHARACTERISTICS

Provider

- ☐ Local, Regional, State Government
- ☐ Non-Profit Organization
- ☐ Commercial
- ☐ Educational
- ☐ Other (_____)
- ☐ Copyright Holder (_____)
- ☐ Visitor Counter
- ☐ Update Frequency
- ☐ Audio Features

Visual Content

- ☐ Scenic Images
- ☐ Map Information
- ☐ Regional Location
- ☐ Area Location
- ☐ City
- ☐ Other (_____)

Interactive Capabilities

- ☐ E-Mail
- ☐ File Downloading
- ☐ Software Sharing
- ☐ Publication Ordering
- ☐ Other (_____)

III. SUBJECT CONTENT

Tourist/Visitor Information/Attractions

- ☐ Calendar of Events
- ☐ Points of Interest/Attractions
- ☐ Accommodations
- ☐ Restaurants
- ☐ Entertainment
- ☐ Shopping
- ☐ Visitors Bureau/Welcome Center
- ☐ Other (_____)

Business/Economic Development

- ☐ Chamber of Commerce/Economic Development
- ☐ Business Directory
- ☐ Business Home Pages
- ☐ Real Estate
- ☐ Media
- ☐ Downtown Organizations
- ☐ Other (_____)

Community Services/Resources/Character

- ☐ Demographics (Community Profile)
- ☐ History
- ☐ Climate
- ☐ Community Groups and Associations
- ☐ Places of Worship
- ☐ Community Services (Social-Referral)
- ☐ Newcomer/Relocation Information
- ☐ Local Resident Home Pages
- ☐ Other (_____)

Other Home Page Links

- ☐ State Government
- ☐ Local Government
- ☐ Federal Government
- ☐ Business
- ☐ Education
- ☐ News (Newspaper, CNN, Election)
- ☐ Leisure (Sports, Tourism)
- ☐ Search Engines (Yahoo, Lycos)
- ☐ Climate
- ☐ Area Community Networks
- ☐ Gopher Servers
- ☐ Other (_____)

IV. LOCAL GOVERNMENT INFORMATION

Elected/Appointed Officials

☐ City Manager/Administrator	☐ Photo	☐ Biography	☐ Duties	☐ Listing & Phone
☐ Mayor/Chief Executive	☐ Photo	☐ Biography	☐ Duties	☐ Listing & Phone
☐ Council/Legislative Board	☐ Photo	☐ Biography	☐ Duties	☐ Listing & Phone
☐ City Clerk	☐ Photo	☐ Biography	☐ Duties	☐ Listing & Phone
☐ City Attorney	☐ Photo	☐ Biography	☐ Duties	☐ Listing & Phone
☐ Other Boards & Commissions	☐ Photo	☐ Biography	☐ Duties	☐ Listing & Phone

Functions, Services and Activities

	<u>Listing</u>	<u>Brief Description</u>	<u>Description</u>
☐ Community Development/Planning			
☐ Consumer Affairs			
☐ Economic Development/Doing Business in			
☐ Education			
☐ Emergency/Medical			
☐ Environmental Protection (Recycling)			
☐ Financial/Fiscal			
☐ Fire			
☐ Health & Human Services			
☐ Housing			
☐ Information Management			
☐ Judicial/Municipal Court			
☐ Libraries			
☐ Licenses & Permits			
☐ Parks & Recreation			
☐ Personnel & Human Resources			
☐ Police			
☐ Public Works/Engineering			
☐ Purchasing (Bids, Contracts)			
☐ Transportation			
☐ Utilities			
☐ Miscellaneous			
☐ (_____)			
☐ (_____)			

Citizen Communication--Legislative

☐ Council Agendas
☐ Council Minutes
☐ Meeting Schedules by Specific Date
☐ Government Calendar of Events and Activities
☐ Other Boards & Commissions
☐ (_____)

___ Citizen Communication--Administrative

- ___ Press Releases
- ___ Newsletters
- ___ Regular reports from administrator/town manager
- ___ State of the City Address
- ___ Election Results
- ___ Recent Mayor's speeches

___ Government Documents

- ___ Annual Reports
- ___ Bills and Resolutions
- ___ Budget Information
- ___ Laws, Ordinances & Codes
- ___ Rules & Regulations
- ___ Statistical Reports/Compilations

APPENDIX B: LOCAL GOVERNMENT WWW SITES SURVEYED

ALABAMA: Huntsville (171,000 pop)
ALASKA: Juneau (27,000)
ARIZONA: Apache Junction (20,000) (suburban Phoenix)
 Gilbert (61,000) (sub Phoenix)
ARKANSAS: El Dorado (24,000)
CALIFORNIA: Berkeley (99,000) (San Francisco Bay area)
 Beverly Hills (32,000) (Los Angeles)
 Chula Vista (136,000) (sub San Diego)
 Danville (37,000) (S.F. Bay area)
 Davis (51,000) (Sacramento area)
 Downey (95,000) (Los Angeles)
 Escondido (115,000) (sub San Diego)
 Pasadena (132,000) (Los Angeles)
 Pinole (20,000) (S.F. Bay area)
 Redding (70,000) (Northern Calif)
 Santa Barbara (87,000) (Southern Calif)
 Seaside (40,000) (Monterey area)
 Torrance (133,000) (Los Angeles)
COLORADO: Boulder (84,000)
 Lamar (9,000)
 Littleton (35,000) (sub Denver)
CONNECTICUT: Manchester (52,000) (sub Hartford)
 Newington (29,000) (sub Hartford)
 Tolland (12,000) (sub Hartford)
FLORIDA: Coral Springs (85,000) (sub Miami)
 Melbourne (65,000)
 North Miami Beach (38,000) (sub Miami)
 Quincy (7,500) (Tallahassee area)
 Tallahassee (127,000)
GEORGIA: Winder (8,000) (sub Atlanta)
IDAHO: Pocatello (48,000)
ILLINOIS: Carol Stream (37,000) (sub Chicago)
 Elmhurst (43,000) (sub Chicago)
 Flossmoor (8,500) (sub Chicago)
 Moline (44,000)
 Tinley Park (41,500) (sub Chicago)
INDIANA: Evansville (127,000)
IOWA: Fort Dodge (26,000)
KANSAS: Mission (9,500) (sub Kansas City)
 Topeka (120,000)
KENTUCKY: Fort Thomas (16,000) (sub Cincinnati)
MAINE: Camden (5,100)
MARYLAND: Annapolis (35,000)
 Chestertown (4,100)
 Frostburg (7,500)
 Rockville (48,000) (sub Washington, D.C.)
 Salisbury (21,000)
 Takoma Park (17,000) (sub Washington, D.C.)
 Westminster (15,000)
MASSACHUSETTS: Lexington (60,000) (sub Boston)

MASSACHUSETTS: Medford (60,000) (sub Boston)
 Newton (83,000) (sub Boston)
 Worcester (170,000)
MICHIGAN: Cedar Springs (3,000) (sub Grand Rapids)
 Grand Haven (12,000)
 Muskegon (41,000)
MINNESOTA: Chanhassen (12,000) (Twin Cities area)
 Mankato (32,000)
 Rochester (77,000)
 Roseville (34,000) (Twin Cities area)
MISSOURI: Clayton (14,000) (sub St. Louis)
 Liberty (21,000) (sub Kansas City)
 Springfield (143,000)
NEBRASKA: Aurora (4,200)
 Cambridge (1,100)
 Grand Island (40,000)
 Papillion (15,000) (sub Omaha)
NEVADA: Reno (158,000)
NEW HAMPSHIRE: Dover (26,000)
 Hanover (9,100)
NEW JERSEY: Burlington (12,500) (sub Philadelphia)
 Haddonfield (12,000) (sub Philadelphia)
 Hopatcong (16,000) (North Jersey)
 Old Bridge (57,000) (North Jersey)
 Plainfield (47,000) (North Jersey)
NEW MEXICO: Taos (4,100)
NEW YORK: Clifton Park (31,000) (sub Albany)
 Colonie (8,100) (sub Albany)
 Groton (2,500) (Ithaca area)
 Henrietta (37,000) (sub Rochester)
 Irvington (6,500) (Westchester Co)
 Ithaca (30,000)
 Kingston (23,500) (Hudson Valley)
 Ramapo (94,000) (sub New York City)
 Tonawanda (66,000) (sub Buffalo)
NORTH CAROLINA: Belmont (8,200) (sub Charlotte)
 Chapel Hill (45,000)
 Garner (15,000) (sub Raleigh)
NORTH DAKOTA: Hillsboro (1,500)
 Minot (35,000)
OHIO: Celina (10,000) (NW Ohio)
 Chillicothe (23,000) (south Ohio)
 Eastlake (21,500) (sub Cleveland)
 Gahanna (30,000) (sub Columbus)
 Grove City (23,000) (sub Columbus)
 Lima (46,000)
 North Olmsted (35,000) (sub Cleveland)
OKLAHOMA: Yukon (21,000) (sub Okla City)
OREGON: Coos Bay (15,500)
 Eugene (115,000)
 Wilsonville (10,000) (sub Portland)
PENNSYLVANIA: Altoona (52,000)

PENNSYLVANIA: Lower Pottsgrove (9,000) (sub Philadelphia)
 Upper Dublin (25,000) (sub Philadelphia)
 Upper St. Clair (20,000) (sub Pittsburgh)
 RHODE ISLAND: Providence (161,000)
 SOUTH CAROLINA: Chapin (400) (sub Columbia)
 Greenville (59,000)
 Mauldin (14,000) (sub Greenville)
 Myrtle Beach (25,000)
 Summerville (26,000) (sub Charleston)
 SOUTH DAKOTA: Aberdeen (25,000)
 Pierre (13,000)
 TENNESSEE: Farragut (13,000) (sub Knoxville)
 Gatlinburg (3,500)
 Knoxville (170,000)
 Oak Ridge (28,000) (sub Knoxville)
 Smyrna (20,000) (sub Nashville)
 TEXAS: Benbrook (22,000) (sub Fort Worth)
 Brownsville (100,000) (south Texas)
 College Station (58,000)
 Coppell (25,100) (sub Dallas)
 Denton (66,000) (north Texas)
 Fredericksburg (7,000)
 Keller (14,000) (sub Fort Worth)
 Lubbock (188,000) (West Texas)
 Mansfield (16,000) (sub Fort Worth)
 Richardson (77,000) (sub Dallas)
 Vidor (11,000) (Beaumont area)
 UTAH: Cedar City (18,000)
 VERMONT: Burlington (40,000)
 VIRGINIA: Alexandria (112,000) (sub Wash, D.C.)
 Blacksburg (35,000)
 Charlottesville (41,000)
 Poquoson (11,500) (Tidewater area)
 Radford (16,000)
 Staunton (25,000)
 Williamsburg (12,000)
 WASHINGTON: Des Moines (18,000) (sub Seattle)
 Kent (39,000) (sub Seattle)
 Mercer Island (21,000) (sub Seattle)
 Olympia (34,000)
 Redmond (36,000) (sub Seattle)
 Sea Tac (24,000) (sub Seattle)
 Spokane (180,000)
 Tumwater (10,000) (sub Seattle)
 Vancouver (48,000) (sub Portland)
 WEST VIRGINIA: Clarksburg (19,000)
 Morgantown (26,000)
 WISCONSIN: Green Bay (97,000)
 Madison (199,000)
 WYOMING: Riverton (9,500)

TOTAL 153 SITES

REFERENCE LIST

- Bender, David R, Sarah T. Kadee and Sandy L. Morton. 1991. National Information Policies: Strategies for the Future. Washington, DC: Special Libraries Association.
- Cetron, Marvin J. and Owen Davies. 1994. Mastering Information in the New Century. Washington, DC: Special Libraries Association.
- Evans, V. Tessa. 1995. Blackout: Preventing Racial Discrimination on the Net. Library Journal 120 (September 15): 44-46.
- Farber, Evan I. 1995. Plus ca Change... (The More Things Change...). Library Trends 44 (Fall): 420-38.
- Fry, Bernard M. 1978a. Government Publications: Their Role in the National Program for Library and Information Sciences. Washington, DC: National Commission on Libraries and Information Science.
- _____. 1982b. The need for a theoretical base. In Collection development and public access of public documents: Proceedings of the first annual library government documents and information conference held in Boston, MA 3-4 March 1981, edited by Peter Hernon. Westport, CT: Meckler.
- Guernsey, Lisa. 1996. The Electronic Soapbox. The Chronicle of Higher Education 22(May 3): A29-32.
- Langelier, Patricia A. 1995a. Special Series: Local government on the Internet part one: What you can find, how to get on and how to get around. Popular Government 61 (Summer): 43-45.
- _____. 1995b. Special Series: Local government on the Internet part two: Electronic mailing lists. Popular Government 61(Fall): 43.
- Maxwell, Bruce. 1995. Gateways to state and local government information on the Internet. Database 18 (December): 24-31.
- Moura, Brian. 1996. San Carlos discovers the Internet. Public Management 78 (January): 31-36.
- Parhamovich, Maggie. 1994. Internet waves. Documents to the People 22 (September): 160-161.
- Pask, Judith M. 1995. Undergraduate Education and the Internet. Library Trends 44 (Fall): 306-17.
- Purcell, Gary R. 1983. Summary of conference papers. In Communicating public access to government information: Proceedings of the second annual library government documents and information conference held in Arlington, VA 26-27 March 1982, edited by Peter Hernon. Westport, CT: Meckler.
- Richardson, Jr., John V. 1983. The nature of research in government publications: preliminary findings. In Communicating public access to government information: Proceedings of the second annual library government documents and information conference

held in Arlington, VA 26-27 March 1982, edited by Peter Hernon. Westport, CT: Meckler.

Sclove, Richard E. 1995. Democracy and Technology. Washington, DC: Guilford.

Shade, Leslie. 1995. Wired in the Ivory Tower: Access and Copyright Issues Surrounding the Internet and Higher Education in North America. Education for Information. 13 (September): 211-28.

Smith, Diane L., ed. 1993. Management of Government Information Resources in Libraries. Englewood, CO: Libraries Unlimited.

Stivers, Cathie. 1995. Internet: The Contemporary Health Educator's Most Versatile Tool. Journal of Health Education. 26 (July/August): 196-99.

Swanbeck, Jan and Peter Hernon, eds. 1993. Depository Library Use of Technology: A Practitioner's Perspective. Norwood, NJ: Ablex.

Taylor, Kenneth C. 1995. More Environmental Resources on the Internet. Environmental Protection. 6 (June): 58.

Varis, Tapio. 1995. The Role of Peace Education and the Media in the Prevention of Violence: A Global Perspective. Thresholds in Education. 21 (May): 5-10.